

Appl. No. 10/727,390
Amtd. Dated 22 November 2004
Reply to Office action of 24 August 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1-42 (canceled).

43. (original) An integral choke assembly comprising:
a common mode choke comprising a common mode core wound with at least two common mode coils; and

a differential mode choke comprising a differential mode core wound with at least one differential mode coil,

wherein the common and differential mode choke cores are configured so that at least one magnetic flux path is shared by magnetic flux generated by common mode coils and differential mode coils.
44. (original) The assembly of claim 43 wherein the common mode coils and differential mode coils are connected in series.
45. (original) The assembly of claim 43, wherein the common mode core comprises a higher permeability material than the differential mode core.
46. (original) The assembly of claim 43, wherein the common mode core comprises a closed rectangular core wound with three common mode coils , one for each phase, and wherein the differential mode core comprises an E core wound with a respective differential mode coil on each leg, the legs of the E core facing the closed rectangular core and sharing a part of magnetic flux path of the closed rectangular core.
47. (original) The assembly of claim 46, wherein the respective phases of the common mode coils and differential mode coils are connected in series.
48. (original) The assembly of claim 43, wherein the common mode core comprises a top closed rectangular core wound with three common mode top coils and a bottom closed

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rectangular core wound with three common mode bottom coils, and wherein the differential mode core comprises three posts with a respective differential mode coil wound on each post, the posts being arranged between the top and bottom closed rectangular cores and sharing a part of top and bottom rectangular magnetic flux paths.

49. (original) The assembly of claim 43, wherein the common mode core comprises a closed rectangular core wound with two common mode coils, and wherein the differential mode core comprises a U core wound with two differential mode coils on each leg, the legs of the U core facing the closed rectangular core and sharing a part of magnetic flux path of the closed rectangular core.
50. (original) The assembly of claim 43, wherein the common mode core comprises a top closed rectangular core wound with one common mode top coil and a bottom closed rectangular core wound with one common mode bottom coil, and wherein the differential mode core comprises two posts with a differential mode coil on each post, the two posts arranged between the top and bottom closed rectangular cores and sharing a part of top and bottom rectangular magnetic flux paths.
51. (original) An integral choke assembly comprising:
a three phase common mode choke comprising a common mode core, wherein the common mode core comprises closed rectangular core wound with three common mode coils, one for each phase; and
a three phase differential mode choke comprising a differential mode core, wherein the differential mode core comprises an E core wound with a respective differential mode coil on each leg, the legs of the E core facing the closed rectangular core and sharing a part of magnetic flux path of the closed rectangular core.
52. (original) The assembly of claim 51, wherein the respective phases of the common mode coils and differential mode coils are connected in series.
53. (original) An integral choke assembly comprising:
a three phase common mode choke comprising a common mode core, wherein the common mode core comprises a top closed rectangular core wound with three common

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mode top coils and a bottom closed rectangular core wound with three common mode bottom coils; and

a three phase differential mode choke comprising a differential mode core, wherein the differential mode core comprises three posts, with a respective differential mode coil on each post, the three posts arranged between the top and bottom closed rectangular cores and sharing a part of top and bottom rectangular magnetic flux paths.

54. (original) The assembly of claim 53, wherein the respective phases of the common mode coils and differential mode coils are connected in series.
55. (original) An integral choke assembly comprising:
 - a single phase common mode choke comprising a common mode core, wherein the common mode core comprises a closed rectangular core wound with two common mode coils; and
 - a single phase differential mode choke comprising a differential mode core, wherein the differential mode core comprises a U core wound with two differential mode coils on each leg, the legs of the U core facing the closed rectangular core and sharing a part of magnetic flux path of the closed rectangular core.
56. (original) The assembly of claim 55, wherein the single phase common mode and differential mode chokes are connected in series.
57. (original) An integral choke assembly comprising:
 - a single phase common mode choke comprising a common mode core, wherein the common mode core comprises a top closed rectangular core wound with one common mode top coil and a bottom closed rectangular core wound with one common mode bottom coil; and
 - a single phase differential mode choke comprising a differential mode core, wherein the differential mode core comprises two posts with a differential mode coil on each post, the two posts arranged between the top and bottom closed rectangular cores and sharing a part of top and bottom rectangular magnetic flux paths.